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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/698,261

10/31/2003

George E. Mueller

59967-44

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22504

7590

11/17/2006

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EXAMINER

DINH, TIEN QUANG

ART UNIT

PAPER NUMBER

3644

DATE MAILED: 11/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/698,261

Applicant(s)

MUELLER ET AL.

Examiner

Tien Dinh

Art Unit

3644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7 and 9-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-21 is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-14, 22-27, 32 and 33 is/are rejected.
- 7) ☒ Claim(s) 28-31 and 34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7, 9-14, and 22-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is not understood what “the destruction of the first external payload package will not affect the operational viability of the orbital vehicle” means. What does operational viability mean? Does it pertain to the structure, cost, etc.? The phrase is vague and indefinite. Furthermore, what does “destruction” mean? What qualify it as in the range of “destruction”.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 3, 11, and 26, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Schwartz.

Schwartz discloses a system having a reusable orbital vehicle (see figure 1), a thermal protection system 5, 7, 12 that are mounted to the skin 8 of the vehicle, inherently an internal payload coupled to the inner portion of the vehicle such as the fuel, engine, support structure, electronics, etc., and external payload packages (the fins in figure 1) that are positioned on the outermost layer of the vehicle and is exposed to the atmosphere. Please note that “reusable” is intended use and carries no patentable weight. The inherent rocket engine is located at the rear/second end of the vehicle and this is where the external packages are located. Since the fins are located to the rear, they are rearward of the midpoint between the first end and the second end.

Re claim 3, please note that it is inherent that the external packages are retained and received at the attachment positions.

Claims 1-4, 7, 9-14, and 26, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Jouffreau.

Jouffreau discloses a system having a reusable, elongated shape, orbital vehicle (see figure 1), a thermal protection system 16e, 34, that are mounted to the skin 30 of the vehicle, inherently an internal payload coupled to the inner portion of the vehicle such as the fuel, engine, support structure, electronics, etc., external payload packages 37, 40, 41, 42, that are positioned on the outermost layer of the vehicle and is exposed to the atmosphere, and carrier plate 36 that is intermediate to the outer skin surface of the vehicle and the packages (see figure 6). The external packages are placed from the front to the rear/skirt part of the vehicle. Essentially, the packages are placed all over the outside part of the vehicle. Please note that “reusable” is

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intended use and carries no patentable weight. The rocket engine is located at the rear/second end of the vehicle.

Re claim 13, please note that any parts on the interior portion of the aft skirt can be broadly read as a protected attachment position. Please see the inside of today's interior portion of the aft skirt. Re claim 14, a screw or attachment members in the interior portion is well known in this day and age. The applicant has not challenged that these parts are well known in his response.

Claims 27 32, 33, and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Mueller et al.

Mueller et al teaches a reusable vehicle with a rocket engine 152, an aft skirt, and an attachment member 324 that is attached to the interior portion of the aft skirt and to receive an experiment 312. See figure 13. The attachment member clearly/inherently has base portion with a first and second end that is attached to the skirt, an intermediate portion having first and second ends, and a terminal portion having first and second ends that are connected to the experiment. The examiner takes official notice that mounting brackets are well known in this day and age and that one skilled in the art would have used a mounting bracket in Mueller et al's system to safely secure the attachment member 156. RE claim 35, it is inherent that the attachment member 156 has a mounting member that allows it to connect to the experiment 154.

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwartz.

Schwartz discloses all claimed parts except for the sensors. The examiner took official notice on this in the last office action and the applicant has not challenged this. Hence, these are well known parts that one skilled in the art would have used to know the operational functions of the vehicle.

Claims 5, 6, and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jouffreau in view of Bridges et al.

Jouffreau discloses all claimed parts except for the access panel. However, Bridges disclose a reusable orbital vehicle that has access panels/landing gear doors (see figures 4-7) are well known (looks like the space shuttle).

It would have been obvious to use an access panels/landing gear doors in Jouffreau's system as taught by Bridges et al to protect the landing gears. Please note since the access panels are at the lower end of the vehicle, the panels contain the external payload packages. Re claim 6, it is inherent that the access panel is removable.

Re claims 22-24, the examiner took official notice on this in the last office action and the applicant has not challenged this. Hence, these are well known parts that one skilled in the art would have used to know the operational functions of the vehicle.

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Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mueller et al.

RE claims 36, the Examiner takes official notice that sensors are well known in this day and age and that one skilled in the art would have used sensors in Mueller et al's system to understand/collect data from the operation of the parts.

***Response to Arguments***

The Examiner has used newly applied arts to reject the claims. This renders applicant's arguments moot.

***Allowable Subject Matter***

Claims 15-21 are allowed.

Claims 28-31 and 34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tien Dinh whose telephone number is 571-272-6899. The examiner can normally be reached on 9-6.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teri Luu can be reached on 571-272-7045. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TD

*Teri Luu*